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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MANIWANG, JOSEPH R	
ART UNIT	**PAPER NUMBER**
2144	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/055,597	PESHKIN ET AL.	
	Examiner	Art Unit	
	Joseph Maniwang	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in regard to the Response received 27 July 2006.

Claim Rejections - 35 USC 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

3. Claims 1-59 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. All the claims recite the limitation "low-processor-load aggregation device" in various lines of the independent claims. There is insufficient antecedent basis in the specification for this limitation in the claims. It is unclear what a low-processor-load aggregation device is and how it is distinguished from any/all other types of devices. The specification does not provide adequate an express definition, nor is there a clear description of what qualities or properties are necessary to permit appropriate labeling of a device as being a low-processor-load aggregation device. Further, the use of the "low-processor-load" descriptor is relative in nature, and cannot be reasonably quantitatively defined given the description of the invention in the present specification. In fact, one section of the current specification which discusses the low-processor-load aggregation unit (250) as comprising a hybrid "system", as well as non-hybrid systems (inter alia,

Page 11-12, Figures 2, 4B). It remains unclear what constitutes a "low-processor-load aggregation" device/system, what device(s) comprise the system, and the characteristics of the system as a whole, or of any particular device.

5. Claim 4 recites "the low-processor-load unit" in Line 5 of the claim. There is a lack of proper antecedent basis in the claim for this limitation. It is presumed this limitation should read "low-processor-load device" in order to remain consistent with the claims relied upon for proper antecedent basis. Claims 5-7 also use this terminology, and inherit the deficiencies of their respective parent claims.

6. Claims 27-39 and 46-51 use "means-plus-function" seemingly invoking 35 U.S.C. § 112, sixth paragraph interpretation. It is unclear what structure is being relied on for proper interpretation of the claims in light of 35 U.S.C. § 112, sixth paragraph, and which, if any, portions of the specification are being relied upon to impart additional structure to the claims for interpretation of the currently claimed invention. Applicant is requested to provide specific section(s) of the present specification relied upon for proper interpretation of these claims if interpretation under 35 U.S.C. § 112, sixth paragraph is desired, to remove any ambiguity of the metes and bounds of the presented claimed invention.

C laim interpretation and construction

7. At the time of filing, the term "aggregation" directly infers the summarizing or merging of numerous routes or flows into a single route or flow. This is the founding idea for the concept of multiplexing, the joining of multiple flows into a single, logical flow which was able to be "demultiplexed", or separated, after transport across (generally) a single, logical transport medium.

8. Likewise, at the time of filing, link aggregation was a computer networking term which described the use of multiple Ethernet network cables and/or ports in parallel in order to increase the overall link speed beyond the limits of any one single cable or port. Link aggregation remains an inexpensive way to set up a high-speed backbone network that transfers much more data than any one single port or device can utilize. This would have allowed several devices to communicate simultaneously at their full single-port speed, while not allowing any one single device to monopolize all available backbone capacity.

9. Given these basic definitions, the claimed "low-processor-load aggregation device" which "coordinates at least one network address with at least one internal network

tag associated with at least one network station", is met by a number of prior known devices, including virtual local area network (VLAN) switches, and generalized gateways. Logical units like these function to accept "external" packets and messages (i.e., "external" to the internal, local network), and "coordinate" (i.e., correlate, map, or associate) these external address(es) and packets to internal devices, including workstations. Known "aggregation" devices, like routers, switches, multiplexers, and more gateways, were well known to reside internally on a local area network. Gateways, for instance, were known to exist to perform address translation, correlating "external addresses" with mapping to "internal addresses" simply to route information. Further, many of these devices were reasonably considered "low-processor-load" devices, since minimal, if any, processing of the information within was performed other than examination of packet header(s) for routing (such information is also considered content of the packet/message). Adding the known complexities of VLAN establishment, operation, and prior art techniques of this type of network workstation arrangement, it is unclear how the Applicant considers many of the claims to accurately represent the inventive concept, and constitute new and non-obvious subject matter. The subject matter as set forth in many of the claims (e.g., claims 14, 16, 23, 24, 26, 27, 28, 31, 32, etc.) are stunningly broad, and fail to provide an adequate basis for determination of allowable subject matter. Significant discussion of what the terms used in the claims intent to encompass is required, and modification of the claims to include specifics of what it is the Applicant regards as the invention, and the interaction of the inventive components with the system as a whole.

10. For the purposes of claim construction, the term "low-processor-load aggregation

device/unit/system" as claimed could reasonably be considered to be any system component, which aggregates data, flows into single logical "pipe" or flow, where significant processing of packet/frame/message content is absent. This includes multiplexing, routing, network address translation, and encapsulation, since none of these operations require significant processing from the unit performing the function(s).

Claim Rejections - 35 USC §102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this **country, more than one year prior to the date of application** for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application fled under the treaty defined in section 351(a) shall have the effect under this subsection of a national application **published** under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English **language;** or
> (2) a patent granted on an **application** for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

12. Claims 1-59 are rejected under 35 U.S.C. §102(e) as being anticipated by Ono et al. (U.S. Patent Number 6,967,958), hereinafter referred to as Ono.

13. Ono disclosed a voice over IP (VOIP) gateway device which functioned to received packetized information from an external network and route direct it to specific terminals using unique addresses on the internal network. See, inter alia, Column 9, Lines 53-63. Various components of the gateway device can be considered a "low-processor-load aggregation device" since (1) many components of the system perform

little, if any, processing on the received packets (low-processor-load) and (2) multiple terminal units are addressable and routable on the internal network through the same channel (aggregation). Note, inter alia, Figure 1, where multiple subscriber terminals were concurrently connected and accessing an external network, and Figures 2 and 3, where a solid communicative line dictates direct packet transfer between a subscriber device and an external IP network without going through any of the management or notification status processing in the gateway device. The system also functioned to recognize various types of traffic based on content and route traffic accordingly, and handle control messages, inter alia, in Column 15, Lines 33-44. Voice processing was clearly evident, inter alia, in Column 16, Line 43 through Column 17, Line 3. Various types of subscriber communication equipment was also disclosed as operational in typical VOIP systems, inter alia, in Figure 22, including facsimile machines, and VoIP telephones, along with traditional standard computers.

14. The claimed invention as broadly set forth was fully disclosed by Ono.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that

was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

17. Claims 1-59 are rejected under 35 U.S.C. §103(a) as being unpatentable over Rekhter et al. (U.S. Patent Number 6,339,595), hereinafter referred to as Rekhter.

18. Rekhter disclosed the use of network tag(s) associated with particular station(s) as part of a virtual local area network (VLAN). See, inter alia, Column 3 Lines 37-56. The "ends" of the logical channels were expressly defined and evident in this environment. See, inter alia, edge routers (PE) at Column 2, Lines 63-65, and Column 6, Lines 51-67. The mapping to private, internal, network addresses was inherent since information was routed. See, inter alia, Column 8, Line 56 through Column 9, Line 22. Various types of networks, network configurations, functional intermediate devices, and terminal units as claimed do not constitute novel distinctions over Rekhter, inter alia, Column 1, Lines 58-67, and well established, known, and widely implemented devices and functionality. Thus, the invention as overly broadly claimed was clearly described in full by Rekhter.

Response to Arguments

19. Applicant's arguments filed on 27 July 2006 have been carefully considered but they are not deemed fully persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address applicants' main points of contention. Applicant's arguments include:

A. Applicant argues that Ono discloses an IP network coupled to a set of gateway equipment that are not equivalent to the low-processor-load-aggregation device recited in the claims.

As to Point A, it the position of the Examiner as previously stated that the low processor-load aggregation device can be reasonably considered to be any system component which aggregates data flows into single logical "pipe" or "flow, where significant processing packet/fame/message content is absent.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Maniwang whose telephone number is (571) 272-3928. The examiner can normally be reached on 8:00-6:00, 1st and 2nd Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn, Jr. can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JM

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